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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/766,020	01/18/2001	Ji Zhang	CISCP158/3179	8083

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EXAMINER

AN, SHAWN S

ART UNIT

PAPER NUMBER

2613

DATE MAILED: 04/26/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/766,020

Applicant(s)

ZHANG ET AL.

Examiner

Shawn S An

Art Unit

2613

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 15 April 2004.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-30 is/are pending in the application.
- 4a) Of the above claim(s) 16-25 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-15 and 26-30 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 2.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Response to Restriction/Election

1. Applicants' election with traverse of species of Group I, which reads on claims 1-15 and 26-30 as in Paper No. 4 has been acknowledged. The traversal is on the ground(s) that all of the claims relate to bit rate conversion using requantization. This is not found persuasive because the burden is proved by the seven distinct (independent) species, which follows:

seven distinct species as depicted in figures 1, 2A, 2B, 4D, 5B, 5C, and 6, respectively.

The prior art searching and a prosecution clearly would be a burden based on the seven species. Furthermore, a burden and a distinct (independent) are two separate criterion. The burden is met by seven species and the distinct (independent) is met by the diverse elements between the drawings, wherein one embodiment is not deemed obvious over any other species identified.

Therefore, the requirement is still deemed proper and is therefore made FINAL.

Specification

2. The lengthy specification has not been checked to the extent necessary to determine the presence of all possible minor errors. Applicant's cooperation is requested in correcting any errors of which applicant may become aware in the specification.

Claim Objections

3. Claim 27 is objected to because of the following informalities: On claim 27, line 1, "means for means for" is redundant, and should be corrected as "means for". Appropriate correction is required.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claims 1-8, 12-13, 15, and 26-30 are rejected under 35 U.S.C. 102(b) as being anticipated by Haskell et al (5,687,095).

Regarding claims 1, 3, 26-28, and 30, Haskell et al discloses a system/method/software (Fig. 6; col. 11, lines 1-4) for converting the bit rate of a compressed bitstream, the system/method/software comprising:

means for basic requantizing a first portion of the bitstream containing video data using a first re-quantization scheme; and

means for requantizing a second portion of the bitstream containing video data using a second re-quantization scheme (abs.; Fig. 1, 107; col. 10, lines 49-57).

Regarding claim 2, Haskell et al discloses the second re-quantization scheme is computationally more demanding than the first re-quantization scheme (abs.; bit rate increase).

Regarding claims 4 and 29, Haskell et al discloses means for performing motion compensated re-quantization (Fig. 7, 107).

Regarding claim 5, Haskell et al discloses determining the available bandwidth of the channel (col. 1, lines 46-48).

Regarding claim 6, Haskell et al discloses full decoding (104) and re-encoding (109) of the second portion.

Regarding claims 7 and 12-13, Haskell et al discloses changing the resolution of the second portion (Fig. 2, CIF, QCIF frames) (Note: chrominance

component (U) has only half of the resolution of their luminance components) (e.g., luminance (Yn) component has 288 lines of 352 pixels and chrominance components (U, V) have 144 lines of 176 pixels.

Regarding claim 8, Haskell et al discloses a frame/picture of video data (CIF picture).

Regarding claim 15, Haskell et al discloses monitoring load of a processor in a network device (Fig. 8).

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 9-11 and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Haskell et al (5,687,095).

Regarding claims 9-11, Haskell et al discloses the compressed bit stream and the portion including the P frame, wherein the P frame is the last P frame in a GOP (col. 7, lines 22-29).

Haskell et al does not specifically disclose well known standard MPEG compressed bit stream comprising a B frame.

However, MPEG is a video compression scheme met by International standards (see Applicants; page 2, lines 24-25).

Further, MPEG standards offer three types of frames, that is I, P, and B (bidirectionally predicted-code frame) frames.

Furthermore, Haskell et al teaches that the video transmission rate matching techniques are generally applicable to any compression algorithm (col. 3, lines 40-45).

Therefore, it would have been obvious to a person of ordinary skill in the relevant art employing the Haskell et al's system for converting the bit rate of a compressed bitstream to implement the MPEG standards comprising the B frame in order to expand the coding formats, thereby including at least H.261 and MPEG-2.

Regarding claim 14, Haskell et al does not specifically disclose re-quantization scheme being performed in real-time.

However, Haskell et al teaches that a faster method of performing video bit rate matching is needed, due to delay in applications requiring real-time communication (col. 2, lines 47-54).

Therefore, it would have been obvious to a person of ordinary skill in the relevant art employing the Haskell et al's system for converting the bit rate of a compressed bitstream to implement the real time re-quantization scheme in order to prevent delays associated with critical time dependent applications.

Conclusion

8. The prior art made of record and not relied upon is considered pertinent to Applicant's disclosure.

A) Seo et al (6,208,688 B1), Method of selecting a requantization step size and controlling a bitrate.

B) Yan et al (5,623,312), compressed domain bit-rate reduction system.

9. Any inquiry of a general nature or relating to the status of this application should be directed to the Group receptionist whose telephone number is (703) 305-4700.

10. Any inquiry concerning this communication or earlier communications from the Examiner should be directed to Shawn S An whose telephone number is 703-305-0099. The examiner can normally be reached on Flex hours (10).

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11. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

12. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



USPTO
PATENT EXAMINER

SSA

Primary Patent Examiner

4/22/04